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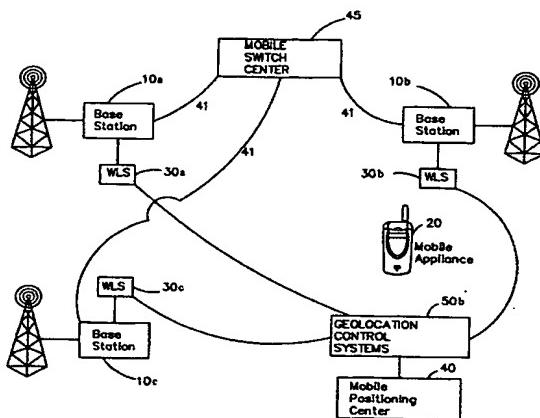
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[Continued on next page]

(54) Title: NETWORK OVERLAY LOCATION SYSTEM AND METHOD FOR AIR INTERFACE WITH FREQUENCY HOPPING



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(57) Abstract: Embodiments of a system and method are disclosed that enable geo-location of a mobile appliance (20) communicating over a frequency hopping air interface for a network overlay geolocation system having plural wireless location sensors (30). The wireless location sensors (30) include a radio receiver channel capable of receiving the forward channels of the air interface transmitted from the base station (10) to the mobile appliance (20). The network overlay geo-location system of the present disclosure monitors these forward channels and measures parameters that allow the geolocation system to synchronize with the hopping of the air interface on the reverse channel. The plurality of sensors measure an attribute of a signal on the reverse channel to thereby enable geo-location. Synchronization can also be reference to a stable system clock and the plurality of sensors may be tuned in reference to the system clock to enable measurement of the frequency hopping reverse channel.

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/32579

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04Q 7/20  
US CL : 455/456.1

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : Please See Continuation Sheet

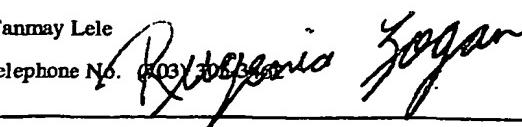
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,295,455 B1 (FISCHER et al.) 25 September 2001 (25.09.2001) Figures 1 and 4 and starting column 5, line 28 and ending column 6, line 61; column 10, lines 39 -57	1-27
Y	US 6,334,059 B1 (STILP et al.) 25 December 2001 (25.12.2001) starting column 9, line 47 and ending column 10, line 27	1-27
Y	US 2002/0039904 A1 (ANDERSON et al.) 04 April 2002 (04.04.2002) paragraphs 00017, 0062 -0065, 0074, 0077 -0081	1-27
A	US 6,188,351 B1 (BLOEBAUM) 13 February 2001 (13.02.2001) starting column 3, line 54 and ending column 5, line 35	1,2,9,18,23,27
A	US 5,506,863 A (MEIDAN) 09 April 1996 (09.04.1996) starting column 3 line 63 and ending column 4, line 63	1,2 -4, 9 -13,18,23,27

<input type="checkbox"/>	Further documents are listed in the continuation of Box C.	<input type="checkbox"/>	See patent family annex.
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"P"	document published prior to the international filing date but later than the priority date claimed		

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**Continuation of B. FIELDS SEARCHED Item 1:**

455/456.1; 404.1,404.2,422.1,423,424,426.1,435.1,456.1,456.2,456.3,456.4,456.5,456.6,502,515,516,517;  
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